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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,026	05/30/2001	Chinping Q. Yang	SONY/89	9006

26875 7590 08/18/2004

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CINCINNATI, OH 45202

EXAMINER

MAI, TAN V

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/870,026	Applicant(s) YANG ET AL.	
	Examiner Tan V Mai	Art Unit 2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito. Rejection grounds continue to be those set forth in the previous office action (Paper No. 2, paragraph 4).

3. Claims 1, 4-12, and 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nillesen.

Rejection grounds continue to be those set forth in the previous office action (Paper No. 2, paragraph 5).

4. Applicant's arguments filed on 04-22-04 have been fully considered but they are not persuasive.

Applicant, in their remarks, argues that: (1) "Ito actually **teaches away from discarding a bit**", (2) "[m]oreover, Applicants **traverse the assertion of the Office Action that the multiplication and accumulation functions described in Ito are suggestive of or motivative an IIR fliter**" and (3) "Nillesen **similarly teaches neither an IIR filter nor discarding at least one bit from a feedback signal**" (emphasis added).

With respect to the arguments, the examiner carefully reviews all the applied references and the claimed invention.

Art Unit: 2124

First, the examiner believes that the **output of shifter (8)** is equivalent to the claimed "discard at least one bit from the feedback signal", e.g., see col. 4, lines 5-6 "when the **data is to be shifted right by a single bit in the shifter**,...". The examiner notes that the independent claim [1] broadly recites "..., wherein the filter use a **feedback signal** to modify ..., wherein the **feedback signal** comprises a sequence of bits, comprising discard at least one bit from the feedback signal". Therefore, the **output of shifter (8)** is equivalent to the claimed "discard at least one bit from the feedback signal". It is noted that Ito does disclose the **output of shifter (8)** coupled to other elements [for performing additional function(s)] before feedback to the adder (5); however, the claim read on Ito.

Second, the "multiplication and accumulation functions" is well known the filter art, e.g., see Satoshi (US Pat. 5,944,775, Figs. 1-7; Abstract, "[a] sum-of-products arithmetic unit includes ..., a multiplier, an adder,...; col. 1, lines 8-11, "[t]he present invention relates to a sum-of-products arithmetic unit. More specifically, the present invention relates to a sum-of-products arithmetic unit which functions as an **IIR filter (recursive filter)**").

Third, Nillesen discloses (1) "**recursive first order digital video signal filter**" (e.g., see Title and Abstract) and (2) the result of "truncation777 circuit (37)" is equivalent to the claimed "discard at least one bit from the feedback signal".

Therefore, the rejections are still proper.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cited references is art of interest.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan V. Mai whose telephone number is (703) 305-9761. The examiner can normally be reached on Tue-Fri from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone numbers for the organization where this application or proceeding is assigned are:

After-final (703) 746-7238

Official (703) 746-7239

Art Unit: 2124

Non-Official/Draft (703) 746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



TAN V. MAI
PRIMARY EXAMINER